The Environmental Technology Verification (ETV) Program's Role in Homeland Security

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The purpose of this poster will be to provide information concerning the technology testing and performance verification activities in support of the Agency's Homeland Security mission. The Agency is now engaged in identifying and filling data and informational gaps with our sister agencies and departments including, the Department of Homeland Security (DHS). As part of EPA's effort, the Environmental Technology Verification Program (ETV) has been tapped to verify the performance of three classes of technologies: (1) to monitor and ensure the quality of the nation's drinking water systems and supplies, (2) to monitor indoor environments in buildings, and (3) to clean up contamination from intentional acts. The poster will contain general information about the following aspects of performance verification:

WATER SECURITY: The Office of Research and Development's (ORD) newly created National Homeland Security Research Center (NHSRC) and the Office of Water's (OW) Water Protection Task Force (WPTF) are working collaboratively on technology verifications to support the needs of the nation's drinking water supply system operators and the public. Under a funding agreement with OW, two ETV technology verification organizations were funded to develop protocols and to test technologies related to ensuring the safety and security of the nation's drinking water systems and supplies. Water security technologies are already undergoing verification at the Advanced Monitoring Systems (AMS) Center located at Battelle in Columbus, Ohio. This center has been funded to develop protocols and test technologies for the detection of chemical and biological warfare agents that may be introduced into drinking water. NSF International located in Ann Arbor, Michigan manages the ETV Drinking Water Systems and the Water Quality Protection Centers. It has been funded to develop protocols and test technologies for point-of-use treatment of biological and chemical contaminants and for technologies for treating wastewater resulting from the decontamination of buildings.

SAFE BUILDINGS: In addition to its Water Security Program, the NHSRC Safe Buildings Program has called upon ETV to conduct tests and develop protocols for technologies used for monitoring, measuring, detecting, and decontaminating chemical and biological warfare agents introduced into buildings and other structures. Public and private-sector buildings that house the Nation's workforce may be targets of future terrorist attacks, as they represent locations where many hundreds or thousands of people congregate during a typical work day. In addition to buildings, there is a need to protect transient populations that use facilities such as stadiums and transportation hubs.

In fiscal year 2002, ORD provided the start-up funding to begin initial verification testing efforts with two ETV technology verification organizations. Research Triangle Institute, which manages the ETV Air Pollution Control Technology Center, will focus on developing protocols and testing technologies used for cleaning and containing contaminated building ventilation air. Battelle, having demonstrated its expertise in testing and evaluating monitoring technologies, is also being tapped to focus on developing protocols and testing technologies used for monitoring, measuring and detecting contaminants in indoor air and on surfaces. None of the existing ETV technology verification organizations had ever been asked to test and evaluate building

decontamination technologies, so a competition was held to identify a contractor with the necessary expertise. Battelle successfully demonstrated that it had the appropriate expertise and is now funded to test and evaluate the performance of technologies used to decontaminate the interior and exterior of buildings.

The poster will also discuss our interactions with stakeholders and technical experts. Each of the ETV technology verification organizations works closely with stakeholder groups to ensure that the most up to date information and expertise are used in testing and evaluation efforts. The stakeholders include representatives from the myriad of user communities, as well as technical experts whose skills can be brought to bear on developing the test design and evaluating performance data.

Finally, the poster will offer information concerning the performance verification testing schedule. The technology verification organizations are charged with implementing “rapid” verification. The goal is to complete verification in four to six months from the time the vendors agree to participate. Completing the process culminates in an Environmental Technology Verification Report and a signed Verification Statement for each participating technology.

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